WHAT IS CLAIMED IS:

1. A method of fabricating a liquid crystal display device, comprising:

forming a first orientation film on a first substrate;

forming a second orientation film on a second substrate;

spacing the first and second substrates apart by a gap;

adding an additive to a ferroelectric liquid crystal;

inserting the ferroelectric liquid crystal with the additive in the gap;

aligning the ferroelectric liquid crystal by inducing an electric field across the ferroelectric liquid crystal over a phase transition temperature of a SmC^* phase; and

forming polymer networks in the ferroelectric liquid by polymerizing the additive.

2. A method of fabricating a liquid crystal display device according to claim 1, wherein the additive includes a monoacrylate compound.

3. A method of fabricating a liquid crystal display device according to claim 1, wherein the additive includes a diacrylate compound.

4. A method of fabricating a liquid crystal display device according to claim 1, wherein the polymer networks are formed by exposing the ferroelectric liquid to light.

5. A method of fabricating a liquid crystal display device according to claim 1, wherein the exposing light is ultraviolet.

6. A method of fabricating a diffraction grating, comprising:

adding an additive to a ferroelectric liquid crystal;

inserting the ferroelectric liquid crystal having the additive between first and second substrates;

forming a plurality of first grating portions by producing a plurality of first polymer networks in the ferroelectric liquid crystal; and

forming a plurality of second grating portions by producing a plurality of second polymer networks in the ferroelectric liquid crystal.

7. A method of fabricating a diffraction grating according to claim 6, wherein the first grating portions are produced by:

illuminating first portions of the ferroelectric liquid crystal with light;

applying a first electric field having a first direction across the first portions; and

maintaining the temperature of the ferroelectric liquid crystal above a phase transition temperature of a SmC* phase.

8. A method of fabricating a diffraction grating according to claim 7, wherein the first portions are illuminated through a mask.

9. A method of fabricating a diffraction grating according to claim 7, wherein the illuminating light is ultraviolet.

10. A method of fabricating a diffraction grating according to claim 6, wherein the additive includes a monoacrylate compound.

11. A method of fabricating a diffraction grating according to claim 6, wherein the additive includes a diacrylate compound.

12. A method of fabricating a diffraction grating according to claim 7, wherein the second grating portions are produced by:

illuminating second portions of the ferroelectric liquid crystal with light;

applying a second electric field having a second direction across the second portions; and

maintaining the temperature of the ferroelectric liquid crystal above a phase transition temperature of a SmC* phase.

13. A method of fabricating a diffraction grating according to claim 12, wherein second direction is opposite to the first direction.

14. A method of fabricating a diffraction grating according to claim 12, wherein an alignment direction of the ferroelectric liquid crystal layer in the first grating portions is opposite to an alignment direction of the ferroelectric liquid crystal layer in the second grating portions.

15. A liquid crystal projector, comprising:

a light source for producing light;

a plurality of light valves for selectively transmitting said light, each of said plurality of light valves including a first substrate, a second substrate, and an interposed ferroelectric liquid crystal layer; and

a focusing lens for focusing said transmitted light from said plurality of light valves onto a screen.

16. A liquid crystal projector according to claim 15, further including:

a red dichroic mirror for directing a red portion of said light to a first of said plurality of light valves; and

a green dichroic mirror for directing a green portion of said light to a second of said plurality of light valves.

17. A liquid crystal projector according to claim 15, wherein said interposed ferroelectric liquid crystal layer of each of said plurality of light valves includes a plurality of first grating portions and a plurality of second grating portions, wherein said first and second grating portions have different alignment orientations.

18. A liquid crystal projector according to claim 17, wherein said first grating portions include polymer networks.

19. A liquid crystal projector according to claim 18, wherein said polymer networks are a polymerized monoacrylate compound.

20. A liquid crystal projector according to claim 18, wherein said polymer networks are a polymerized diacrylate compound.

21. A liquid crystal projector according to claim 15, wherein each of said plurality of light valves includes first and second transparent conductive layers on said first and second substrates.

22. A liquid crystal projector according to claim 15, further including an image screen for receiving focused light from said focusing lens.